



Air Quality Permitting Technical Analysis

April 2, 2003

Tier II Operating Permit No. T2-020512

Cooper Ready-Mix, Salmon, Idaho

AIRS Facility No. 777-00314

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FINAL PERMIT

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ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

| | |
|------------------|--|
| AFS | AIRS Facility Subsystem |
| AIRS | Aerometric Information Retrieval System |
| AQCR | Air Quality Control Region |
| CFR | Code of Federal Regulations |
| CO | carbon monoxide |
| Department | Department of Environmental Quality |
| DEQ | Department of Environmental Quality |
| EPA | Environmental Protection Agency |
| HAPs | Hazardous Air Pollutants |
| IDAPA | A numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act |
| lb/hr | pound per hour |
| m | meter(s) |
| MACT | Maximum Available Control Technology |
| NESHAP | Nation Emission Standards for Hazardous Air Pollutants |
| NO ₂ | nitrogen dioxide |
| NO _x | nitrogen oxides |
| NSPS | New Source Performance Standards |
| O ₃ | ozone |
| O&M | operation and maintenance |
| PM | particulate matter |
| PM ₁₀ | particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers |
| PSD | Prevention of Significant Deterioration |
| PTC | permit to construct |
| PTE | potential to emit |
| <i>Rules</i> | <i>Rules for the Control of Air Pollution in Idaho</i> |
| SIP | State Implementation Plan |
| SM | synthetic minor |
| SO ₂ | sulfur dioxide |
| SO _x | sulfur oxides |
| T/yr | tons per year |
| VOC | volatile organic compound |

1. PURPOSE

The purpose for this memorandum is to satisfy the requirements of IDAPA 58.01.01 Sections 400 - 406, *Rules for the Control of Air Pollution in Idaho* for Tier II operating permits.

2. PROJECT DESCRIPTION

This project is for the issuance of a Tier II operating permit for Cooper Ready-Mix, concrete batch plant, located at Salmon, Idaho. The facility's emission source is a cement silo baghouse.

3. FACILITY DESCRIPTION

Cooper Ready-Mix operates a concrete batching facility. The facility's operator/owner voluntarily identified this facility as one which did not have an operating permit. The Cooper Ready-Mix facility consists of a gravel pit, associated roadways, two rock crushers, a cement silo, and assorted weigh bins. This facility does not employ a diesel-fueled or gasoline-fueled generator. Electricity is supplied to the facility by the local utility. The rock crushers have previously been Permitted By Rule (PBR). The concrete batch plant's maximum hourly throughput is 16 cubic yards per hour (cy/hr).

Concrete is produced by combining water, sand and gravel, and Portland cement. A portable concrete batch plant consists of storage bins for the sand and gravel, a storage silo for the cement, weigh bins that weigh each component, a conveyor, a water supply, and a control panel. Sand and gravel are either produced on site or purchased elsewhere. Typically, three or four different sizes of gravel and one or two different sizes of sand are stockpiled for varying job specifications. Cement is delivered by truck and pneumatically transferred to its storage silo. A baghouse is mounted above the silo to capture cement as air is displaced in the silo. For this source category, the baghouse is considered process equipment primarily, and air pollution control equipment secondarily. Power to run the facility is provided by the local utility.

After all of the storage bins are filled, the production process begins when sand and gravel are drop-fed into their respective weigh bins. When a pre-determined amount of each is weighed, the sand and gravel are drop-fed onto an inclined conveyor, which transfers the mixture into a cement truck. A pre-determined amount of cement is also weighed and drop-fed through a rubber chute into the cement truck. The rubber chute directs the cement and provides a measure of dust control. Sometimes, a separate baghouse is used to capture cement dust from the cement weigh bin. Water is then added, and the components are mixed in the truck on the way to the job site.

This Tier II operating permit is required for continued operations of this unpermitted facility. This operating permit will allow this concrete batching facility to operate simultaneously with the two rock crushers. It is important to note that during collocated operations, this concrete batching facility is then part of a single, larger source engaged in the production of concrete, aggregate, and/or asphalt, depending upon which type of portable plants the concrete batching facility is collocated with. While collocated, the two portable plants are considered one source, and the emissions of this single source is the sum of the emissions from the two portable plants. This single, larger source must comply with all applicable federal, state, and local requirements. To maintain compliance, specific requirements and limitations have been included in this Tier II operating permit for this concrete batching facility for collocated operations. As described in the following sections of this Technical Memorandum, specific conservative assumptions and calculations were made to determine these Tier II operating permit collocation requirements.

4. SUMMARY OF EVENTS

| | |
|-----------------|---|
| August 20, 2002 | Tier II Operating Permit Application submitted to DEQ. |
| October 1, 2002 | Tier II Operating Permit Application determined incomplete. |

| | |
|-------------------|---|
| October 10, 2002 | Requested information submitted. |
| November 22, 2002 | Tier II Operating Permit Application determined complete. |
| January 30, 2003 | Published legal notice. |
| January 31, 2003 | Public comment period began. |
| February 17, 2003 | Hearing request date deadline. No hearing requested. |
| March 3, 2003 | Public comment period ended. No comment received. |

5. PERMIT HISTORY

This facility and its equipment have no prior air quality permits. This facility was constructed in April 1981.

6. TECHNICAL ANALYSIS

Emissions Estimates

A spreadsheet has been developed specifically for concrete batching facilities to determine their potential to emit (PTE). PTE is used to determine if Prevention of Significant Deterioration (PSD) or Title V operating permit requirements apply. In determining PTE, the spreadsheet uses production data supplied by the applicant and emission factors from EPA's AP-42. For concrete-batching facilities, PTE is based on emissions from the cement storage silo baghouse, and the cement weigh bin baghouse (if one is used). If the facility includes a generator, its emissions are also included in the determination of the facility's PTE. Because these facilities are not designated facilities or NSPS-affected facilities, fugitive emissions from concrete batch plants do not count toward determining PTE. This facility's PTE is 0.60 tons per any consecutive 12-month period (0.60 T/yr) based on AP-42 emissions factors and facility reported capacity.

The spreadsheet inherently limits emissions below certain triggering levels (i.e., PSD and Title V thresholds) by limiting throughput. If a generator is not used, throughput is solely limited to limit a facility's PTE below 99 T/yr of PM₁₀ emissions. If a generator is used, throughput is limited to protect the NAAQS and it is limited to keep emissions below the 99 T/yr triggering level. The throughput limits for this facility are presented below. The spreadsheet used to calculate the PTE and throughput limit is included as Appendix A of this document.

For collocated operations, a conservative approach is taken by limiting the emissions of each of the collocated units to half of the levels allowed when operating alone. Then the combined emissions of the two collocated sources will be within the allowable levels. See the information below for a more detailed description. This approach is designed to result in acceptable throughput limits for most collocation situations. In cases where the throughput limits are too restrictive, or the equipment quantity exceed the combined limit of two-process equipment, a site-specific analysis and permit amendment may be completed.

Even though fugitive dust emissions are not included to determine PTE, they must be reasonably controlled at all times. In order to ensure the air quality is not degraded beyond the facility boundary, the standard permit requires that no visible emissions be seen crossing the boundary. This provision is included in the standard permit in lieu of fugitive dust modeling.

Modeling

The EPA-approved SCREEN3 model was used in this analysis using stack data provided by the applicant to predict the impact the baghouse emissions may have on the ambient air. A one pound-per-hour emission rate was input into the model, which calculated a maximum 1-hour concentration of 126.1 micrograms per cubic meter (10⁻⁶g/m³) for the cement silo baghouse. This information was input into the spreadsheet that calculated the allowable throughput.

This facility receives its power from the local utility, and does not employ a fossil-fuel powered generator.

Area Classification

Cooper Ready-Mix, located in Lemhi county Idaho, is located in AQCR 63. The area is classified as attainment or unclassifiable for all federal and state criteria air pollutants (i.e., PM₁₀, CO, NO_x, VOCs, and SO_x).

Facility Classification

The facility is not a designated facility as defined in IDAPA 58.01.01.006.27.

The facility is classified as a B source because the actual and potential emissions of any criteria pollutant is less than 100 T/yr.

7. PERMIT REQUIREMENTS

Regulatory Review

This operating permit is subject to the following permitting requirements:

- IDAPA 58.01.01.401 Tier II Operating Permit
- IDAPA 58.01.01.403 Permit Requirements for Tier II Sources
- IDAPA 58.01.01.404.01(c) Opportunity for Public Comment
- IDAPA 58.01.01.404.04 Authority to Revise or Renew Operating Permits
- IDAPA 58.01.01.406 Obligation to Comply
- IDAPA 58.01.01.470 Permit Application Fees for Tier II Permits
- IDAPA 58.01.01.625 Visible Emission Limitation
- IDAPA 58.01.01.650 General Rules for the Control of Fugitive Dust

Facility-wide Conditions

Fugitive Particulate Matter - IDAPA 58.01.01.650-651

Requirement

Facility-wide Condition 2.1 states that all reasonable precautions shall be taken to prevent PM from becoming airborne in accordance with IDAPA 58.01.01.650-651.

Compliance Demonstration

Facility-wide Condition 2.2 states that the permittee is required to monitor and maintain records of the frequency and the methods used by the facility to reasonably control fugitive particulate emissions. IDAPA 58.01.01.651 gives some examples of ways to reasonably control fugitive emissions which include using water or chemicals, applying dust suppressants, using control equipment, covering trucks, paving roads or parking areas, and removing materials from streets.

Facility-wide Condition 2.3 requires that the permittee maintain a record of all fugitive dust complaints received. In addition, the permittee is required to take appropriate corrective action as expeditiously as practicable after receipt of a valid complaint. The permittee is also required to maintain records that include the date that each complaint was received and a description of the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

To ensure that the methods being used by the permittee to reasonably control fugitive PM emissions whether or not a complaint is received, Facility-wide Condition 2.4 requires that the permittee conduct periodic inspections of the facility. The permittee is required to inspect potential sources of fugitive emissions during daylight hours and under normal operating conditions. If the permittee determines that the fugitive emissions are not being reasonably controlled the permittee shall take corrective action as expeditiously as practicable. The permittee is also required to maintain records of the results of each fugitive emission inspection.

Both Facility-wide Conditions 2.3 and 2.4 require the permittee to take corrective action as expeditiously as practicable. In general, the Department believes that taking corrective action within 24 hours of receiving a valid complaint or determining that fugitive particulate emissions are not being reasonably controlled meets the intent of this requirement. However, it is understood that, depending on the circumstances, immediate action or a longer time period may be necessary.

Visible Emissions - IDAPA 58.01.01.625

Requirement

IDAPA 58.01.01.625 and Facility-wide Condition 2.5 state that *"(No) person shall discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three minutes in any 60-minute period which is greater than twenty percent (20%) opacity as determined . . ."* by IDAPA 58.01.01.625. This provision does not apply when the presence of uncombined water, NO_x, and/or chlorine gas is the only reason for the failure of the emission to comply with the requirements of this rule.

Compliance Demonstration

To ensure reasonable compliance with the visible emissions rule, Facility-wide Condition 2.6 requires that the permittee conduct routine visible emissions inspections of the facility. The permittee is required to inspect potential sources of visible emissions, during daylight hours and under normal operating conditions. The visible emissions inspection consists of a see/no see evaluation for each potential source of visible emissions. If any visible emissions are present from any point of emission covered by this section, the permittee must either take appropriate corrective action as expeditiously as practicable, or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of thirty observations shall be recorded when conducting the opacity test. If opacity is determined to be greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee must take corrective action and report the exceedance in its annual compliance certification and in accordance with the excess emissions rules in IDAPA 58.01.01.130-136. The permittee is also required to maintain records of the results of each visible emissions inspection and each opacity test when conducted. These records must include the date of each inspection, a description of the permittee's assessment of the conditions existing at the time visible emissions are present, any corrective action taken in response to the visible emissions, and the date corrective action was taken.

Should a specific emission unit have a specific compliance demonstration method for visible emissions that differs from Facility-wide Condition 2.6, then the specific compliance demonstration method overrides the requirement of condition 2.6. Facility-wide Condition 2.6 is intended for small sources that would generally not have any visible emissions.

Facility-wide Condition 2.6 requires the permittee to take corrective action as expeditiously as practicable. In general, DEQ believes that taking corrective action within 24 hours of discovering visible emissions meets the intent of this requirement. However, it is understood that, depending on the circumstances, immediate action or a longer time period may be necessary.

Excess Emissions – IDAPA 58.01.01.130-136

Requirement

Facility-wide Condition 2.7 requires the permittee to comply with the requirements of IDAPA 58.01.01.130-136 for startup, shutdown, scheduled maintenance, safety measures, upset, and breakdowns. This section is fairly self-explanatory and no additional detail is necessary in this technical analysis. However, it should be noted that subsections 133.02, 133.03, 134.04, and 134.05 are not specifically included in the permit as applicable requirements. These provisions of the *Rules* only apply if the permittee anticipates requesting consideration under subsection 131.02 of the *Rules* to allow DEQ to determine if an enforcement action to impose penalties is warranted. Section 131.01 states “. . . The owner or operator of a facility or emissions unit generating excess emissions shall comply with Sections 131, 132, 133.01, 134.01, 134.02, 134.03, 135, and 136, as applicable. If the owner or operator anticipates requesting consideration under Subsection 131.02, then the owner or operator shall also comply with the applicable provisions of Subsections 133.02, 133.03, 134.04, and 134.05.” Failure to prepare or file procedures pursuant to Sections 133.02 and 134.04 is not a violation of the *Rules* in and of itself, as stated in subsections 133.03.a and 134.06.b. Therefore, since the permittee has the option to follow the procedures in Subsections 133.02, 133.03, 134.04, and 134.05; and is not compelled to, the subsections are not considered applicable requirements for the purpose of this permit and are not included as such.

Compliance Demonstration

The compliance demonstration is contained within the text of IDAPA 58.01.01.130 - 136.

Open Burning – IDAPA 58.01.01.600-616

All open burning shall be done in accordance with IDAPA 58.01.01.600-616.

Monitoring and Recordkeeping

The permittee is required to maintain recorded data in an appropriate location for a period of at least five years in accordance with IDAPA 58.01.01.405.01. Though specific applicable requirements may have record retention times of less than five years, this requirement requires the permittee to maintain all recorded data for a minimum of five years, which will satisfy those shorter record retention times.

NSPS – 40 CFR 60

The date of initial operation for this facility, April 1981, pre-dates the issuance of 40 CFR 60 Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants, August 1985. Consequently, this concrete batch plant is not an NSPS-affected facility.

NESHAPS – 40 CFR 61 and 63

Neither 40 CFR 61 or 63 are applicable to this facility. This facility does not emit hazardous air pollutants.

Cement Silo

Particulate Emissions

The particulate emissions were modeled using the applicant provided data, the EPA approved SCREEN3 modeling software, and a DEQ developed Excel spreadsheet. The resulting emissions for PM₁₀ was determined to be 0.6 T/yr, 0.140 lb/hr and is listed in the facility emission inventory table in the permit.

Compliance Demonstration

The cement silo baghouse shall be operated per the manufacturer's recommended operating procedures as identified in the operation and maintenance (O&M) manual. The facility shall not exceed the production limit of 70,800 cubic yards per any consecutive 12-month period. This production limitation was arrived at during modeling in order to prevent NAAQS particulate violations for this collocated facility. The production of concrete shall be recorded in a log, in cubic yards per day and cubic yards per month. This log shall also provide monthly summaries in order to support the 12-month running totals production limit. This log shall also record the actions taken to limit fugitive dust emissions from the facility. The pressure drop across the baghouse shall be recorded in the log on a daily basis. These records shall be maintained at the facility for 5 years.

8. AIRS INFORMATION

Table 8.1 AIRS/AFS^a FACILITY-WIDE CLASSIFICATION^b DATA ENTRY FORM

| AIR PROGRAM | SIP ^c | PSD ^d | NSPS ^e (Part 60) | NESHAP ^f (Part 61) | MACT ^g (Part 63) | TITLE V | AREA CLASSIFICATION |
|--------------------------------|------------------|------------------|--------------------------------|----------------------------------|--------------------------------|---------|---|
| POLLUTANT | | | | | | | A – Attainment U – Unclassifiable N – Nonattainment |
| SO ₂ ^h | | | | | | | U |
| NO _x ⁱ | | | | | | | U |
| CO ^j | | | | | | | U |
| PM ₁₀ ^k | B | | | | | | U |
| PT (Particulate) ^l | B | | | | | | U |
| VOC ^m | | | | | | | |
| THAP (Total HAPs) ⁿ | | | | | | | |
| | | | APPLICABLE SUBPART | | | | |
| | | | | | | | |

^a Aerometric Information Retrieval System (AIRS) Facility Subsystem (AFS)

^b AIRS/AFS Classification Codes:

- A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For NESHAP only, class "A" is applied to each pollutant which is below the 10 ton-per-year (T/yr) threshold, but which contributes to a plant total in excess of 25 T/yr of all NESHAP pollutants.
- SM = Potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable regulations or limitations.
- B = Actual and potential emissions below all applicable major source thresholds.
- C = Class is unknown.
- ND = Major source thresholds are not defined (e.g., radionuclides).

^c State Implementation Plan (SIP)

^d Prevention of Significant Deterioration (PSD)

^e New Source Performance Standards (NSPS)

^f National Emissions Standards for Hazardous Air Pollutants (NESHAP)

^g Maximum Achievable Control Technology (MACT)

^h Sulfur Dioxide (SO₂)

ⁱ Nitrogen Oxides (NO_x)

^j Carbon Monoxide (CO)

^k Particulate Matter with an aerodynamic diameter of 10 µm or less (PM₁₀)

^l Particulate Matter with an aerodynamic diameter of 2.5 µm or less (PT)

^m Volatile Organic Compounds (VOC)

ⁿ Total Hazardous Air Pollutants (THAP)

9. FEES

Fees do apply to this facility in accordance with IDAPA 58.01.01.407. A fee assessment has been prepared for \$500.00 as calculated by in Appendix C. On August 21, 2002, the facility paid \$500.00 at the time the application was submitted. No outstanding balance exists at this time.

10. RECOMMENDATION

Based on the review of the application materials, and all applicable state and federal regulations, staff recommends that DEQ issue a Tier II operating permit to Cooper Ready-Mix.

APPENDIX A

PTE Spreadsheet

PERMIT LIMITS TABLE

| Pollutant | New Industrial Area | | Agricultural Area | | Columbia River Area | |
|--|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| | 16 yd/hr 240 bbl/day 360 yd/day | 16 yd/hr 240 bbl/day 360 yd/day | 16 yd/hr 240 bbl/day 360 yd/day | 16 yd/hr 240 bbl/day 360 yd/day | 16 yd/hr 240 bbl/day 360 yd/day | 16 yd/hr 240 bbl/day 360 yd/day |
| Production Rate | 16 yd/hr | 16 yd/hr | 16 yd/hr | 16 yd/hr | 16 yd/hr | 16 yd/hr |
| Operational Schedule | 240 bbl/day | 240 bbl/day | 240 bbl/day | 240 bbl/day | 240 bbl/day | 240 bbl/day |
| Therapeutic Limits | 240 yd/day | 240 yd/day | 240 yd/day | 240 yd/day | 240 yd/day | 240 yd/day |
| Landfill Prohibitions | None | None | None | None | None | None |
| CO Emission Standard (lb/day) | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 |
| SO ₂ Emission Standard (lb/day) | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 |
| NO _x Emission Standard (lb/day) | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 |
| TOC Emission Standard (lb/day) | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 |

OUTPUT

POTENTIAL TO EXCEED - BASED ON ANALYSIS USING AIR QUALITY STANDARDS
Assessment/Non-Compliance Areas

| Pollutant | Permitted Controlled Emission Rate | |
|--|---------------------------------------|---------------------------------------|
| | 16 yd/hr 240 bbl/day 360 yd/day | 16 yd/hr 240 bbl/day 360 yd/day |
| Production Rate | 16 yd/hr | 16 yd/hr |
| Operational Schedule | 240 bbl/day | 240 bbl/day |
| Therapeutic Limits | 240 yd/day | 240 yd/day |
| Landfill Prohibitions | None | None |
| CO Emission Standard (lb/day) | 6.00 | 6.00 |
| SO ₂ Emission Standard (lb/day) | 6.00 | 6.00 |
| NO _x Emission Standard (lb/day) | 6.00 | 6.00 |
| TOC Emission Standard (lb/day) | 6.00 | 6.00 |
| Current Emission Rate (lb/day) | 6.00 | 6.00 |
| CO ₂ Emission Rate (lb/day) | 6.00 | 6.00 |
| CH ₄ Emission Rate (lb/day) | 6.00 | 6.00 |
| NO ₂ Emission Rate (lb/day) | 6.00 | 6.00 |
| NO ₃ Emission Rate (lb/day) | 6.00 | 6.00 |
| SO ₃ Emission Rate (lb/day) | 6.00 | 6.00 |
| PM ₁₀ Emission Rate (lb/day) | 6.00 | 6.00 |
| PM _{2.5} Emission Rate (lb/day) | 6.00 | 6.00 |
| CO ₂ Emission Rate (lb/day) | 6.00 | 6.00 |
| CH ₄ Emission Rate (lb/day) | 6.00 | 6.00 |
| NO ₂ Emission Rate (lb/day) | 6.00 | 6.00 |
| NO ₃ Emission Rate (lb/day) | 6.00 | 6.00 |
| SO ₃ Emission Rate (lb/day) | 6.00 | 6.00 |
| PM ₁₀ Emission Rate (lb/day) | 6.00 | 6.00 |
| PM _{2.5} Emission Rate (lb/day) | 6.00 | 6.00 |

| Pollutant | Permitted Controlled Emission Rate | |
|--|---------------------------------------|---------------------------------------|
| | 16 yd/hr 240 bbl/day 360 yd/day | 16 yd/hr 240 bbl/day 360 yd/day |
| Production Rate | 16 yd/hr | 16 yd/hr |
| Operational Schedule | 240 bbl/day | 240 bbl/day |
| Therapeutic Limits | 240 yd/day | 240 yd/day |
| Landfill Prohibitions | None | None |
| CO Emission Standard (lb/day) | 6.00 | 6.00 |
| SO ₂ Emission Standard (lb/day) | 6.00 | 6.00 |
| NO _x Emission Standard (lb/day) | 6.00 | 6.00 |
| TOC Emission Standard (lb/day) | 6.00 | 6.00 |
| Current Emission Rate (lb/day) | 6.00 | 6.00 |
| CO ₂ Emission Rate (lb/day) | 6.00 | 6.00 |
| CH ₄ Emission Rate (lb/day) | 6.00 | 6.00 |
| NO ₂ Emission Rate (lb/day) | 6.00 | 6.00 |
| NO ₃ Emission Rate (lb/day) | 6.00 | 6.00 |
| SO ₃ Emission Rate (lb/day) | 6.00 | 6.00 |
| PM ₁₀ Emission Rate (lb/day) | 6.00 | 6.00 |
| PM _{2.5} Emission Rate (lb/day) | 6.00 | 6.00 |

| Pollutant | Permitted Controlled Emission Rate | |
|--|---------------------------------------|---------------------------------------|
| | 16 yd/hr 240 bbl/day 360 yd/day | 16 yd/hr 240 bbl/day 360 yd/day |
| Production Rate | 16 yd/hr | 16 yd/hr |
| Operational Schedule | 240 bbl/day | 240 bbl/day |
| Therapeutic Limits | 240 yd/day | 240 yd/day |
| Landfill Prohibitions | None | None |
| CO Emission Standard (lb/day) | 6.00 | 6.00 |
| SO ₂ Emission Standard (lb/day) | 6.00 | 6.00 |
| NO _x Emission Standard (lb/day) | 6.00 | 6.00 |
| TOC Emission Standard (lb/day) | 6.00 | 6.00 |
| Current Emission Rate (lb/day) | 6.00 | 6.00 |
| CO ₂ Emission Rate (lb/day) | 6.00 | 6.00 |
| CH ₄ Emission Rate (lb/day) | 6.00 | 6.00 |
| NO ₂ Emission Rate (lb/day) | 6.00 | 6.00 |
| NO ₃ Emission Rate (lb/day) | 6.00 | 6.00 |
| SO ₃ Emission Rate (lb/day) | 6.00 | 6.00 |
| PM ₁₀ Emission Rate (lb/day) | 6.00 | 6.00 |
| PM _{2.5} Emission Rate (lb/day) | 6.00 | 6.00 |

ATTACHMENT NON-COMPLIANCE AREAS

| Pollutant | Permitted Controlled Emission Rate | |
|--|---------------------------------------|---------------------------------------|
| | 16 yd/hr 240 bbl/day 360 yd/day | 16 yd/hr 240 bbl/day 360 yd/day |
| Production Rate | 16 yd/hr | 16 yd/hr |
| Operational Schedule | 240 bbl/day | 240 bbl/day |
| Therapeutic Limits | 240 yd/day | 240 yd/day |
| Landfill Prohibitions | None | None |
| CO Emission Standard (lb/day) | 6.00 | 6.00 |
| SO ₂ Emission Standard (lb/day) | 6.00 | 6.00 |
| NO _x Emission Standard (lb/day) | 6.00 | 6.00 |
| TOC Emission Standard (lb/day) | 6.00 | 6.00 |
| Current Emission Rate (lb/day) | 6.00 | 6.00 |
| CO ₂ Emission Rate (lb/day) | 6.00 | 6.00 |
| CH ₄ Emission Rate (lb/day) | 6.00 | 6.00 |
| NO ₂ Emission Rate (lb/day) | 6.00 | 6.00 |
| NO ₃ Emission Rate (lb/day) | 6.00 | 6.00 |
| SO ₃ Emission Rate (lb/day) | 6.00 | 6.00 |
| PM ₁₀ Emission Rate (lb/day) | 6.00 | 6.00 |
| PM _{2.5} Emission Rate (lb/day) | 6.00 | 6.00 |

| Pollutant | Permitted Controlled Emission Rate | |
|--|---------------------------------------|---------------------------------------|
| | 16 yd/hr 240 bbl/day 360 yd/day | 16 yd/hr 240 bbl/day 360 yd/day |
| Production Rate | 16 yd/hr | 16 yd/hr |
| Operational Schedule | 240 bbl/day | 240 bbl/day |
| Therapeutic Limits | 240 yd/day | 240 yd/day |
| Landfill Prohibitions | None | None |
| CO Emission Standard (lb/day) | 6.00 | 6.00 |
| SO ₂ Emission Standard (lb/day) | 6.00 | 6.00 |
| NO _x Emission Standard (lb/day) | 6.00 | 6.00 |
| TOC Emission Standard (lb/day) | 6.00 | 6.00 |
| Current Emission Rate (lb/day) | 6.00 | 6.00 |
| CO ₂ Emission Rate (lb/day) | 6.00 | 6.00 |
| CH ₄ Emission Rate (lb/day) | 6.00 | 6.00 |
| NO ₂ Emission Rate (lb/day) | 6.00 | 6.00 |
| NO ₃ Emission Rate (lb/day) | 6.00 | 6.00 |
| SO ₃ Emission Rate (lb/day) | 6.00 | 6.00 |
| PM ₁₀ Emission Rate (lb/day) | 6.00 | 6.00 |
| PM _{2.5} Emission Rate (lb/day) | 6.00 | 6.00 |

| Estimated Air Concentrations of Background Volume (ppm) | | | | |
|---|--------|------|-------|--------|
| Parameter | 1-hr | 1-hr | 3-hr | Annual |
| PM ₁₀ | | | | |
| CO | 11.400 | | 5.150 | 35 |
| NO _x | | 5.43 | | 40 |
| SO _x | | | | 24 |
| TCO | | | | |

Concrete Batch Plant Station Characteristics and Impact Estimates

| NON-ATTACHMENT AREAS | | | | | | | | | |
|---------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Concrete Batch Plant Station | | | | | | | | | |
| Parameter | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |

| Concrete Batch Plant Station Characteristics and Impact Estimates | | | | | | | | | |
|---|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Concrete Batch Plant Station | | | | | | | | | |
| Parameter | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |

Notes: 1. TYP: Calculations include concrete batch plant station emissions.
 2. CO: 1.0 lb per Average Fuel
 3. SO_x: 1.0 lb per Average Fuel
 4. NO_x: 1.0 lb per Average Fuel
 5. TYP: Calculations include concrete batch plant station emissions.

| Concrete Batch Plant Station Characteristics and Impact Estimates | | | | | | | | | |
|---|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Concrete Batch Plant Station | | | | | | | | | |
| Parameter | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] | PM ₁₀ Emissions [t/yr] |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| Concrete Batch Plant (Concrete) | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |

APPENDIX B
SCREEN3 OUTPUT

11/15/02
10:22:41

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

ConBat - Cooper Ready-Mix

SIMPLE TERRAIN INPUTS:

| | | |
|-------------------------|---|----------|
| SOURCE TYPE | = | POINT |
| EMISSION RATE (G/S) | = | 0.126000 |
| STACK HEIGHT (M) | = | 12.1920 |
| STK INSIDE DIAM (M) | = | 2.7432 |
| STK EXIT VELOCITY (M/S) | = | 0.0359 |
| STK GAS EXIT TEMP (K) | = | 293.1500 |
| AMBIENT AIR TEMP (K) | = | 288.3722 |
| RECEPTOR HEIGHT (M) | = | 0.0000 |
| URBAN/RURAL OPTION | = | RURAL |
| BUILDING HEIGHT (M) | = | 11.3020 |
| MIN HORIZ BLDG DIM (M) | = | 2.4384 |
| MAX HORIZ BLDG DIM (M) | = | 2.4384 |

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = 0.011 M**4/S**3; MOM. FLUX = 0.002 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

| DIST (M) | CONC (UG/M**3) | STAB | U10M (M/S) | USTK (M/S) | MIX HT (M) | PLUME HT (M) | SIGMA Y (M) | SIGMA Z (M) | DWASH |
|-------------|-------------------|------|---------------|---------------|---------------|-----------------|----------------|----------------|-------|
| 1. | 0.000 | 0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | NA |
| 100. | 126.1 | 3 | 1.0 | 1.0 | 320.0 | 12.20 | 12.46 | 8.14 | SS |
| 200. | 118.5 | 4 | 1.0 | 1.0 | 320.0 | 12.20 | 15.56 | 9.93 | SS |
| 300. | 85.18 | 4 | 1.0 | 1.0 | 320.0 | 12.20 | 22.61 | 13.13 | SS |
| 400. | 78.57 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 15.81 | 8.84 | SS |
| 500. | 75.16 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 19.12 | 10.11 | SS |
| 600. | 67.80 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 22.37 | 10.95 | SS |
| 700. | 61.57 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 25.58 | 12.00 | SS |
| 800. | 55.63 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 28.74 | 13.00 | SS |
| 900. | 50.27 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 31.87 | 13.78 | SS |
| 1000. | 45.58 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 34.97 | 14.66 | SS |
| 1100. | 41.48 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 38.04 | 15.51 | SS |
| 1200. | 37.88 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 41.08 | 16.32 | SS |
| 1300. | 34.73 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 44.10 | 17.12 | SS |
| 1400. | 31.96 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 47.10 | 17.89 | SS |
| 1500. | 29.51 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 50.07 | 18.64 | SS |
| 1600. | 27.34 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 53.03 | 19.38 | SS |
| 1700. | 25.42 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 55.97 | 20.10 | SS |
| 1800. | 23.69 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 58.89 | 20.81 | SS |
| 1900. | 22.15 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 61.80 | 21.50 | SS |
| 2000. | 20.95 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 64.69 | 21.86 | SS |
| 2100. | 19.74 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 67.57 | 22.43 | SS |
| 2200. | 18.64 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 70.43 | 23.00 | SS |

| | | | | | | | | | |
|-------|-------|---|-----|-----|---------|-------|--------|-------|----|
| 2300. | 17.63 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 73.28 | 23.55 | SS |
| 2400. | 16.72 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 76.11 | 24.10 | SS |
| 2500. | 15.88 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 78.94 | 24.63 | SS |
| 2600. | 15.11 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 81.75 | 25.16 | SS |
| 2700. | 14.40 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 84.55 | 25.67 | SS |
| 2800. | 13.74 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 87.34 | 26.18 | SS |
| 2900. | 13.13 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 90.13 | 26.68 | SS |
| 3000. | 12.63 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 92.90 | 26.99 | SS |
| 3500. | 10.42 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 106.61 | 29.00 | SS |
| 4000. | 8.805 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 120.11 | 30.85 | SS |
| 4500. | 7.580 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 133.43 | 32.59 | SS |
| 5000. | 6.624 | 6 | 1.0 | 1.1 | 10000.0 | 13.61 | 146.59 | 34.22 | SS |

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
 146. 129.8 4 1.0 1.0 320.0 12.20 11.71 7.99 SS

DWASH= MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, $X < 3 \times LB$

 *** REGULATORY (Default) ***
 PERFORMING CAVITY CALCULATIONS
 WITH ORIGINAL SCREEN CAVITY MODEL
 (BRODE, 1988)

| | |
|--------------------------------|--------------------------------|
| *** CAVITY CALCULATION - 1 *** | *** CAVITY CALCULATION - 2 *** |
| CONC (UG/M**3) = 3048. | CONC (UG/M**3) = 3048. |
| CRIT WS @10M (M/S) = 1.00 | CRIT WS @10M (M/S) = 1.00 |
| CRIT WS @ HS (M/S) = 1.04 | CRIT WS @ HS (M/S) = 1.04 |
| DILUTION WS (M/S) = 1.00 | DILUTION WS (M/S) = 1.00 |
| CAVITY HT (M) = 24.96 | CAVITY HT (M) = 24.96 |
| CAVITY LENGTH (M) = 9.44 | CAVITY LENGTH (M) = 9.44 |
| ALONGWIND DIM (M) = 2.44 | ALONGWIND DIM (M) = 2.44 |

 END OF CAVITY CALCULATIONS

*** INVERSION BREAK-UP FUMIGATION CALC. ***
 CONC (UG/M**3) = 0.000
 DIST TO MAX (M) = 100.00

DIST TO MAX IS < 2000. M. CONC SET = 0.0

 *** SUMMARY OF SCREEN MODEL RESULTS ***

| CALCULATION PROCEDURE | MAX CONC (UG/M**3) | DIST TO MAX (M) | TERRAIN HT (M) |
|--------------------------|-----------------------|--------------------|---------------------------|
| SIMPLE TERRAIN | 129.8 | 146. | 0. |
| BLDG. CAVITY-1 | 3048. | 9. | -- (DIST = CAVITY LENGTH) |
| BLDG. CAVITY-2 | 3048. | 9. | -- (DIST = CAVITY LENGTH) |

APPENDIX C

Tier II OPERATING PERMIT PROCESSING FEE

Tier II Fee Calculation

Instructions:

Insert the following information and answer the following questions either Y or N. Insert the permitted emissions in tons per year into the table. TAPS only apply when the Tier II is being used for New Source Review.

Company: Cooper ready-Mix
Address: 11 Cooper Circle
City: Salmon
State: Idaho
Zip Code: 83467
Facility Contact: Arvin Cooper
Title: Owner
AIRS No.: 777-00314

N

Did this permit meet the requirements of IDAPA 58.01.01.407.02 for a fee exemption Y/N?

Y

Does this facility qualify for a general permit (i.e. concrete batch plant, hot-mix asphalt plant)? Y/N

N

Is this a synthetic minor permit? Y/N

| Emissions Inventory | |
|---------------------|---------------------------|
| Pollutant | Permitted Emissions (TPY) |
| NOX | 0.0 |
| PM10 | 0.6 |
| PM | 0.0 |
| SO2 | 0.0 |
| CO | 0.0 |
| VOC | 0.0 |
| HAPS/TAPS | |
| Total: | 0.6 |
| Fee Paid | \$500.00 |

Comments: